



Operating System

Microsoft Management Console

Beta 3 Technical Walkthrough

Abstract

Microsoft® Management Console (MMC) is an ISV-extensible, common console framework for management applications. MMC does not provide any management functionality, but instead provides a common environment for snap-ins. Snap-ins are management components integrated into a common host—and this host is MMC. Each snap-in provides one unit of management behavior, and multiple snap-ins can be combined to build a custom management tool. Snap-ins allow a system administrator to extend and customize the console to meet specific management objectives.

MMC is a core part of Microsoft's future management strategy and will be included in the next major release of the Microsoft Windows® 2000 operating system. In addition, Microsoft development groups will use MMC for future management applications.

The beta 3 release introduces some significant changes to MMC. Specifically, there is now the ability to create much more flexible delegated user interfaces and to customize the administration tools. This walkthrough will explore some of these new features.

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INTRODUCTION

The Microsoft® Management Console (MMC) unifies and simplifies day-to-day system management tasks. It hosts tools displayed as consoles. These tools, composed of one or more applications, are built with one or more modules called snap-ins. The snap-ins may also be made up of additional extension snap-ins. These snap-ins assign functionality that allows single-seat control, monitoring, and administration of widespread network resources.

Microsoft provides standard tools with the operating system that perform everyday administrative tasks that users need to accomplish. These are part of the **All Users** profile of the computer and located in the **Administrative Tools** group on the **Startup** menu.

A powerful feature of Microsoft Management Console is that it enables the system administrator to create special tools to delegate specific administrative tasks to users or groups. Saved as MMC console (.msc) files, these custom tools can be sent by e-mail, shared in a network folder, or posted on the World Wide Web. They can also be assigned to users, groups, or computers with system policy settings. A tool can be scaled up and down, integrated seamlessly into the operating system, repackaged and customized.

Building your own tools with Microsoft Management Console's standard user interface is a straightforward process. You can start with an existing console and modify or add components to fulfill your needs, or you can create an entirely new console. The following example shows how to create a new console and arrange its administrative components into separate windows.

CREATING CONSOLES

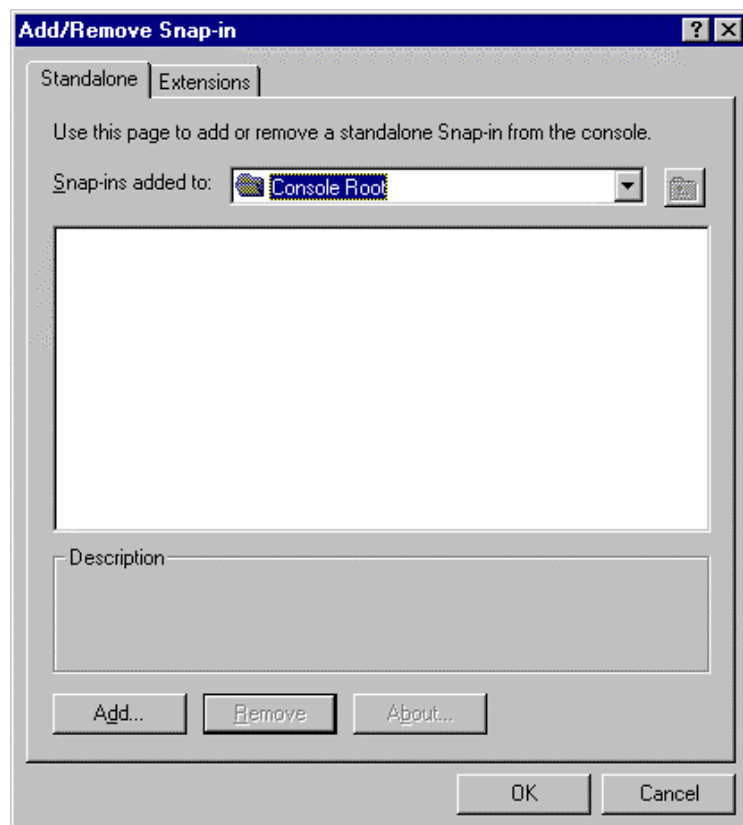
The most common way for administrators to use MMC is to simply start a predefined console file from the **Start** menu. However, to get an idea of the flexibility of MMC it is useful to create a console file from scratch. It is also useful to create a console file from scratch when using the new task delegation features in this version of MMC.

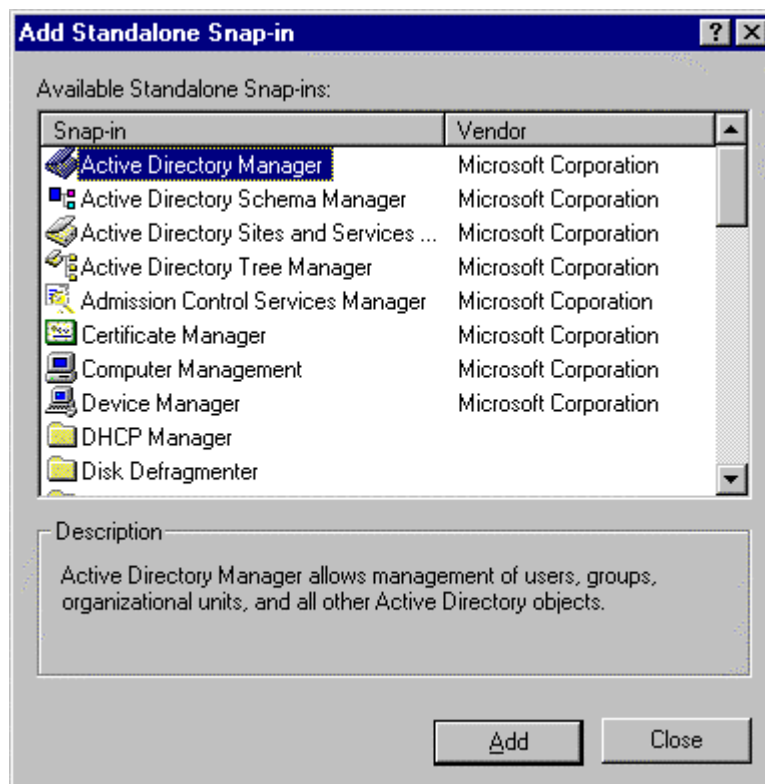
Creating a New Console File

You will start with a new console and add the computer management snap-in.

To create a new console file

1. On the **Start Menu**, click **Run**, type *MMC*, and then click **OK**. Microsoft Management Console opens with an empty console (or administrative tool). The empty console has no management functionality until you add some snap-ins. The MMC menu commands on the menu bar at the top of the Microsoft Management Console window apply to the entire console.
2. On the **Console Menu**, click **Add/Remove Snap-in**. The **Add/Remove Snap-in** dialog box opens. This lets you configure which snap-ins are in the console file and enable extensions. The insertion of the snap-ins can be specified in the **Snap-ins added to** drop-down box. Accept the default, **Console Root**, for this exercise.





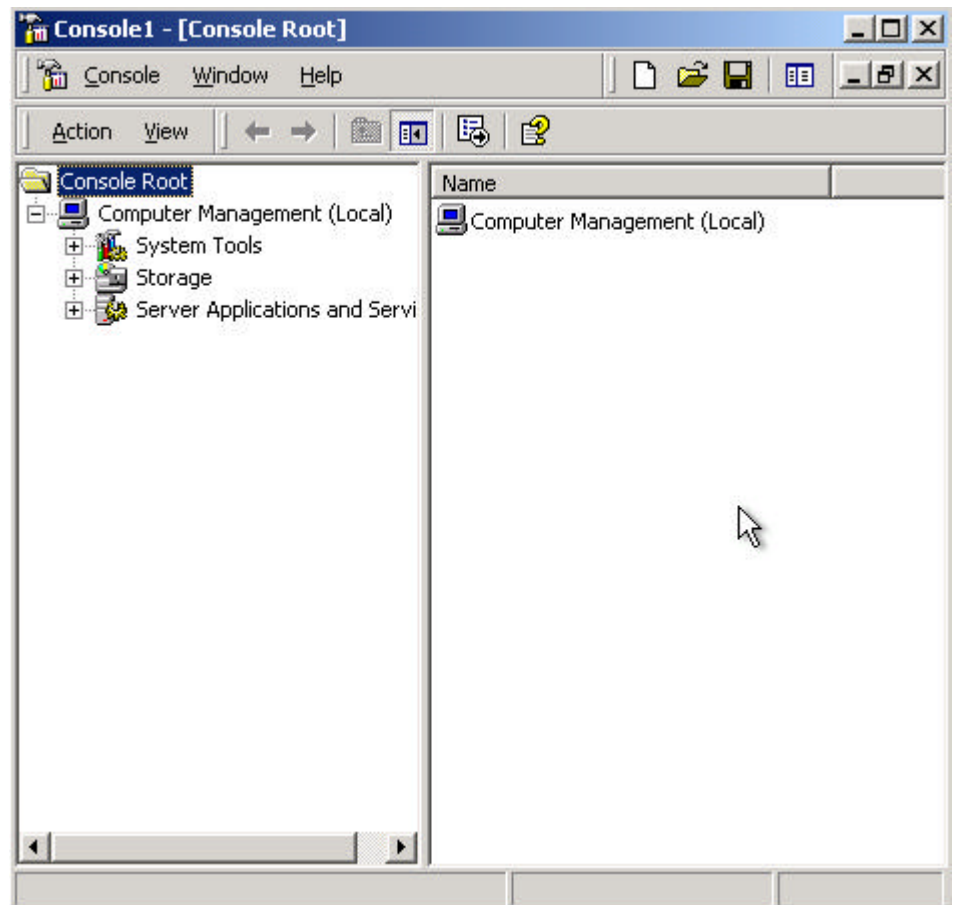
3. Click **Add**. This displays the **Add Standalone Snap-in** dialog box that lists the snap-ins that are installed on your computer.
4. From the list of snap-ins, double-click **Computer Management** to open the **Computer Management wizard** that will step you through the configuration options for the snap-in.
5. Click **Local computer** and select the check box, **Allow the selected computer to be changed when launching from the command line**. The group dialog box **This snap-in will always manage** is common in many of the snap-ins provided by Microsoft. Click **Finish**. This will bring you back to the **Add/Remove Snap-ins** dialog box.
6. Select the **Extensions** tab. On this dialog box, you will see the check box **Add all extensions**. When this check box is selected—the default behavior—all locally-installed extensions that are on the computer will be used. If this check box is not selected, then any extension snap-in in the list that is selected will be explicitly loaded when the console file is opened on a different computer.
7. Click **OK** to close the **Add/Remove Snap-in** dialog box. The **Console Root** window now has a snap-in, **Computer Management**, rooted at the Console Root folder.

Customizing the Display of Snap-ins in the Console: New Windows

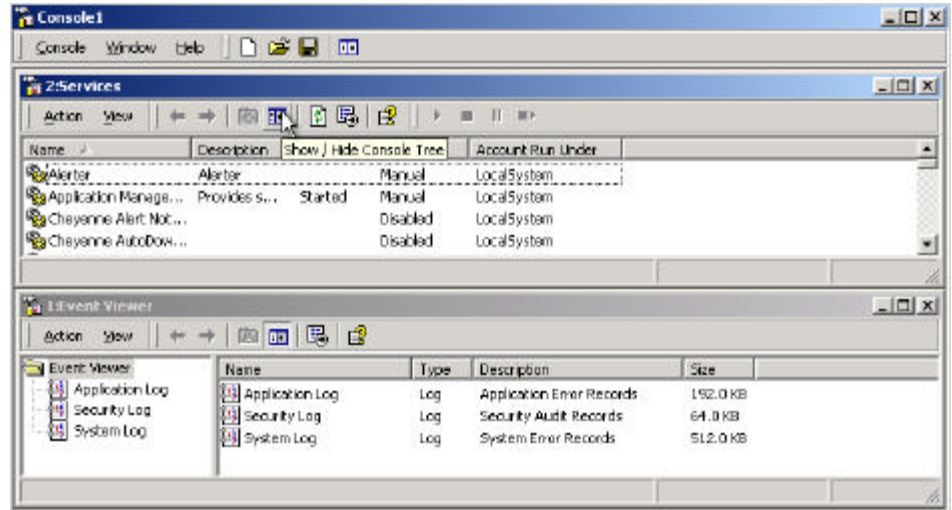
After you add the snap-ins, you can add windows to provide different administrative views in the console.

To add windows

1. In the left pane of the tree view below, click **Computer Management**, then **System Tools**.
2. Right-click the **Event Viewer** folder that opens, and then click **New window from here**. This opens a new **Event Viewer** window rooted at the **Event Viewer** extension to computer management.



3. In the **Console Root** window, right-click the **Services** window, then click **New Window**. This opens a new **Services** window rooted at the **Event Viewer** extension to **Computer Management**. In the new window, click the **Show/Hide Console Tree** toolbar button to hide the console tree. (This button is indicated in the picture below).



4. Close the original window with Console Root showing in it.
5. On the Window menu, select Tile Horizontally. The console file should now appear as shown below:
6. You can now save your new MMC console. Click the **Save as** icon on the **Console** window, and give your console a name. Your console is now saved to a file, and you can provide it to anyone that needs to configure a computer with these tools.

Note: Each of the two smaller windows has a toolbar with buttons and drop-down menus. The toolbar buttons and drop-down menus on these each of these two windows apply only to the contents of the window. You can see here that a window's toolbar buttons and menus change depending on the snap-in selected in the left pane of the window. If you select the **View** menu, you can see a list of available toolbars.

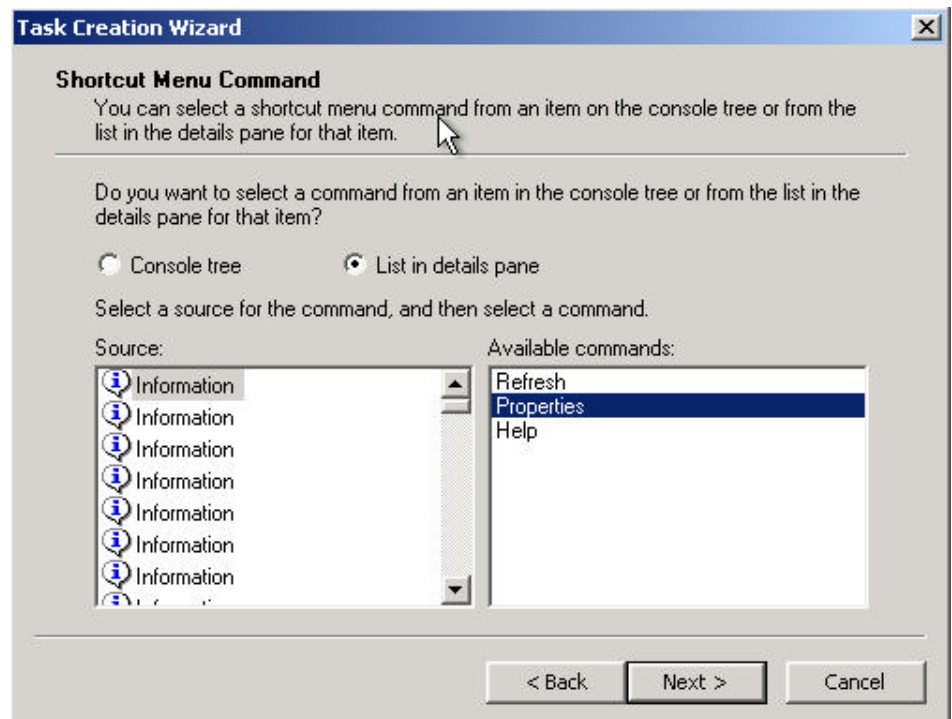
Tip: The windows fit better if your monitor display is set to a higher resolution and small font.

Creating Console Taskpads

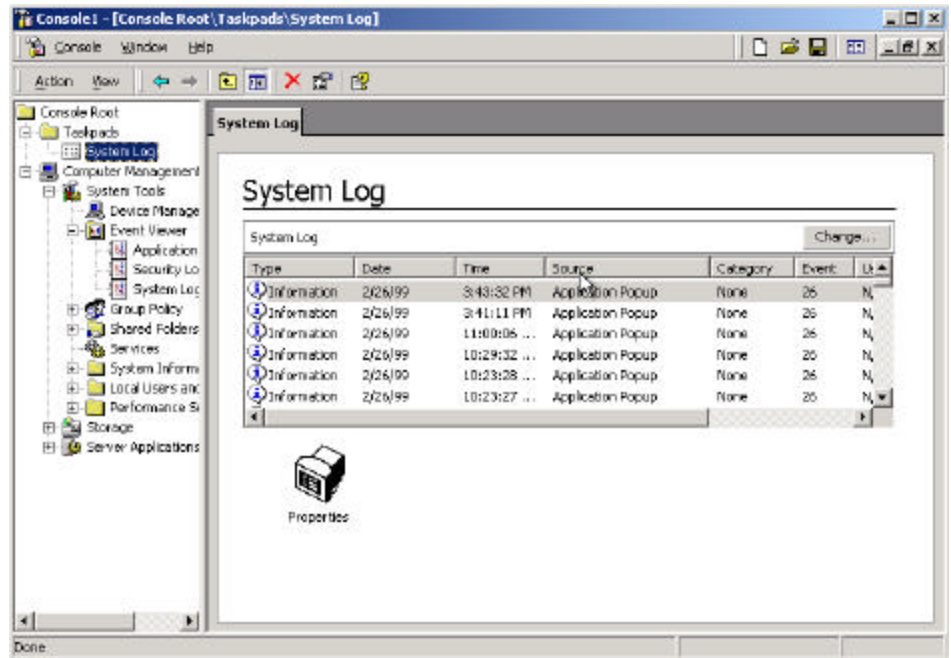
Sometimes when you are creating a console file for another user, it would be useful to be able to give that user a very simplified view with only a few tasks available. Console taskpads allow you to do this.

To create a console taskpad

1. From the **Window** menu, select **New Window**.
2. Close the other two windows (you will save a new console file at the end of this procedure). Maximize the remaining window.
3. In the left pane, click the **Computer Management** folder, then the **System Tools** folder, then the **Event Viewer** folder, then right-click the **System Log** folder, and select **New Taskpad**.
4. Go through the wizard accepting all of the default settings. Make sure the checkbox on the last page is checked so that the **Task Creation** wizard is started automatically.
5. Choose the defaults in the **Task Creation** wizard until you come to the page shown below, then choose a list view task and select **Properties**:

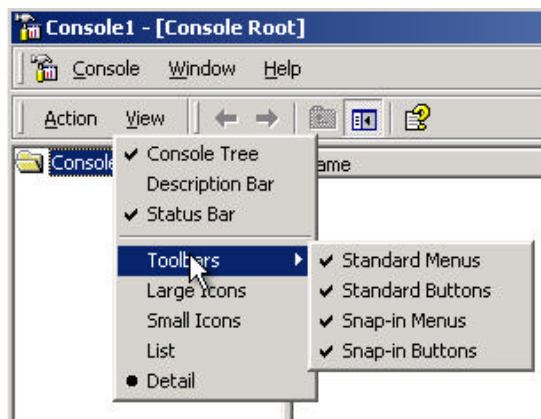


6. Accept the defaults for the rest of the pages. After you select **Finish** on the last page your console should look like the following:

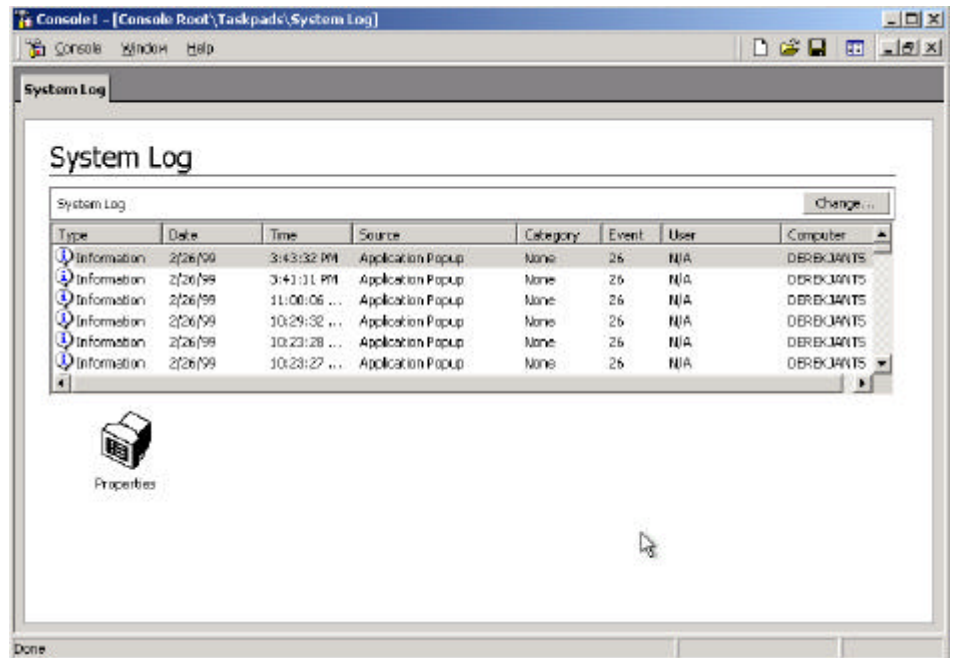


By selecting an Event and clicking **Properties**, you can see the property page for that Event.

7. As in the previous section, press the hide console tree toolbar button.
8. Next, from the view menu select toolbars and click each of the options to hide each type of toolbar. Start at **Snap-in Buttons** and turn off each of the options listed.



The next section will discuss how to lock the console file down so that is the user sees only a limited view. For right now your console file should look like the following:

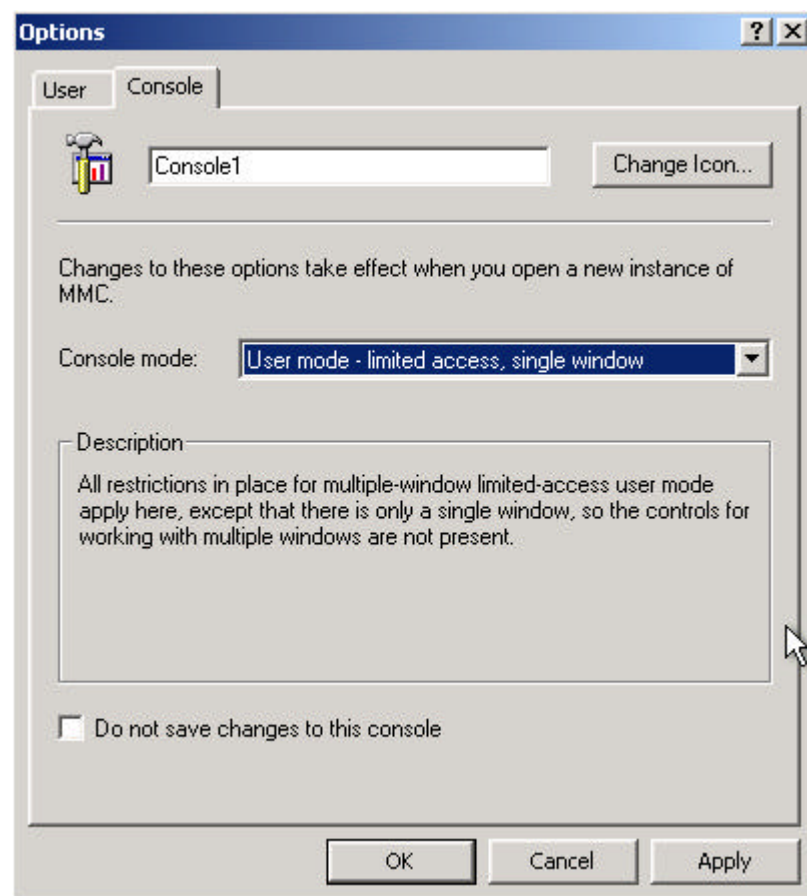


Setting Console File Options

Sometimes when you are creating a console file for another user, it would be useful to be able to prevent that user from further customizing the console file. The **Options** dialog box allows you to do this.

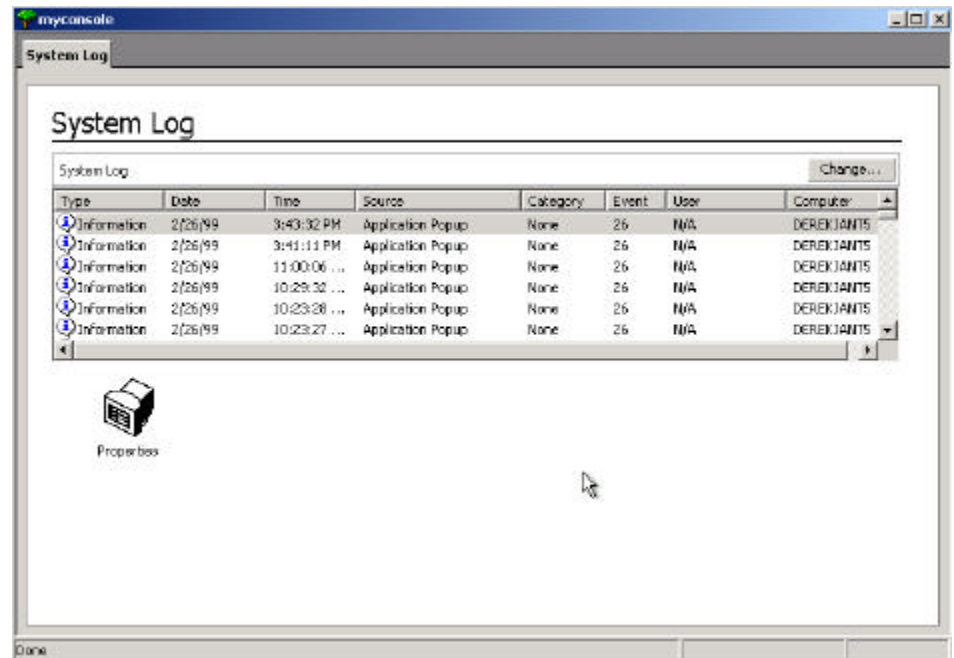
To set the console file options

1. From the **Console** menu, select **Options**, and then choose the **Console** tab.
2. **Change** the **Console Mode** by selecting **User Mode–limited access, single window** from the drop-down dialog box. This will prevent a user from adding new snap-ins to the console file or rearranging the windows.



3. You can change the name from Console1, and you can give it a new icon by clicking **Change Icon**.

4. **Save** the console file. The changes will not take effect until the console file is opened again. At that time, the console file should look like the following:



Microsoft Management Console enables system administrators to create unique consoles for people that report to them or for workgroup managers. They can assign a tool with a system policy, deliver the file by e-mail, or post the file to a shared location on the network. When a workgroup manager opens the document, access will be restricted to those tools provided by the system administrator.

This is just a small example of how Microsoft Management Console enables you to group information and functionality that previously would have required that you open a Control Panel option plus two separate administrative tools. The modular architecture of Microsoft Management Console makes it easy for your system network developers to create snap-in applications that leverage the platform while easing administrative load.

FOR MORE INFORMATION

For the latest information on Microsoft Windows 2000 network operating system, visit our World Wide Web site at <http://www.microsoft.com/windows/server/> and the Windows NT Server Forum on the Microsoft Network (GO WORD: MSNTS).

For the latest information on the Windows 2000 Beta 3, visit the World Wide Web site at <http://ntbeta.microsoft.com/>.

Before You Call for Support

Please keep in mind that Microsoft does not support these walkthroughs. The purpose of the walkthroughs is to facilitate your initial evaluation of the Microsoft Windows 2000 features. For this reason, Microsoft cannot respond to questions you might have regarding specific steps and instructions.

Reporting Problems

Problems with Microsoft Windows 2000 Beta 3 should be reported via the appropriate bug reporting channel and alias. Please make sure to adequately describe the problem so that the testers and developers can reproduce it and fix it. Refer to the Release Notes included on the Windows 2000 Beta 3 distribution media for some of the known issues.